


Reducing Food Waste in the Home

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Let's talk (chat) about.....

- Food waste:
 - Trends
 - Sources
 - Contributing factors
- Why we should be concerned about food waste
- Tips for reducing food waste in the home



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Food Waste or Wasted Food?

Edible food that is lost, discarded, or uneaten.

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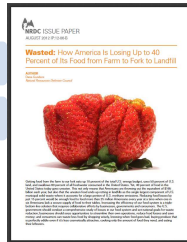
How much food is going to waste in the US?



Up to 40% of food in the US is lost.



Other studies estimate 25-30% (post harvest)

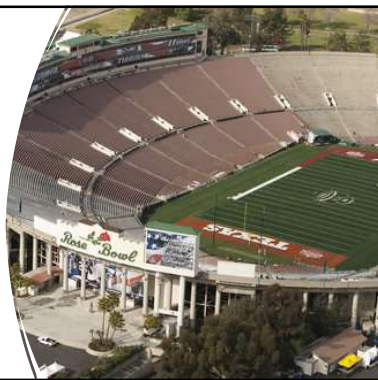


Source: Natural Resources Defense Council, August 2012

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How much food is going to waste in the US?

Enough food to fill the
Rose Bowl **every day**.



• Source: Bloom, J. *American Wasteland: How America Throws Away Nearly Half of Its Food (and What we Can Do About It)*.

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How much food is going to waste in the US?

~20 pounds of food
per person per month



Source: Natural Resources Defense Council, August 2012; Buzby, Wells, and Hyman, USDA ERS, *The Estimated Amount, Value and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the US*, 2014; Hoover D. *Estimating Quantities and Types of Food Waste at the City Level*, NRDC, 2017.

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Let's talk (chat) about it...
 What types of food did you dispose of most often?
 Avoidable, Possibly Avoidable or Unavoidable?

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3-city study of food waste

Kitchen diaries

- 69% was edible
- Most common foods wasted were
 - Fruits and vegetables
 - Leftovers

29% of the trash thrown out by consumers was food



Source: Hoover D. Estimating Quantities and Types of Food Waste at the City Level, NRDC, 2017.

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Why should we care about food waste?

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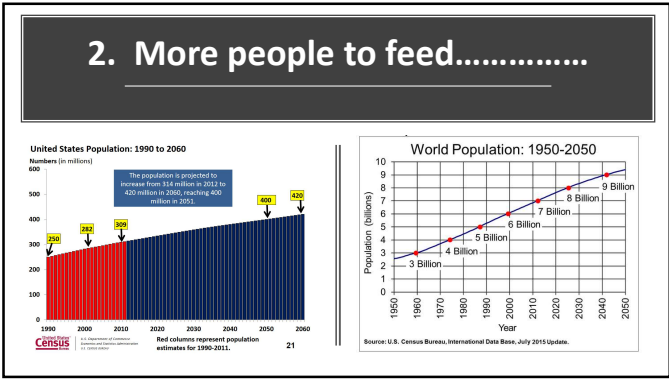
1. Wasted resources

- Food produced in the US uses
 - 10% energy (3% is estimated lost)
 - 50% of land
 - 80% of freshwater (25% is lost)

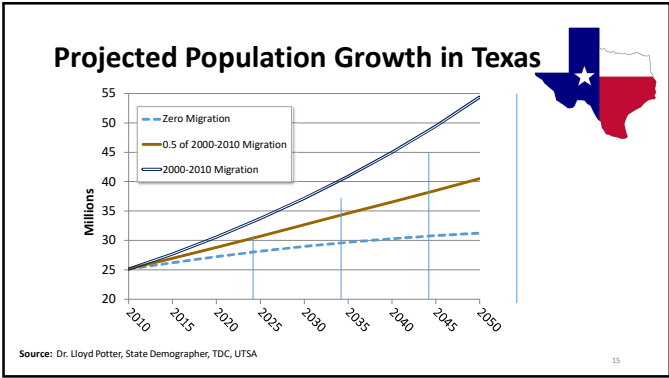
Sources: EPA, 2011; USDA, Natural Resources Defense Council, 2012; Levis et al., *Waste Management*, 2010; Buzby and Hyman, *Food Policy*, 2012.



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3. Wasted food = wasted opportunity to feed hungry people

46.5 million people receive food and other services through food banks every year.

13.3% of Texas households experience food insecurity (2021 USDA data)

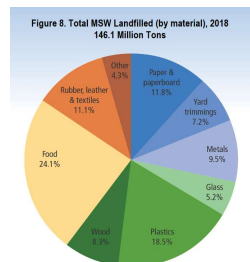
Reducing food losses by **15%** alone could feed more than 25 million Americans every year.



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4. Wasted food contributes to landfills

- Largest component of municipal solid waste; more than plastics, metals, wood or yard waste.
 - Most food waste ends up in a landfill
 - 24% of MSW in landfills is food



Sources: EPA, 2011; USDA, Natural Resources Defense Council, 2012; Buzby and Hyman, Food Policy, 2012; USDA ERS, The Estimated Amount, Value, and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the United States, Feb. 2014.

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5. Wasted food = money lost

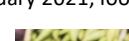
- The value of food lost in the US was estimated at \$165 billion
- Per 4-person **household**, this is estimated at \$1500 a year or \$4.10/day.
- **Per person** estimates range from \$375 to \$400 annually



Sources: EPA, 2011; USDA, Natural Resources Defense Council, 2012; Buzby and Hyman, Food Policy, 2012; USDA ERS, The Estimated Amount, Value, and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the United States, Feb. 2014.

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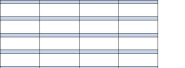
Wasted food costs even more when food prices are rising.....

- Between January 2020 and January 2021, food prices rose 7% (overall)
 - 4.1% for fresh fruits & vegetables
 - 3.1% dairy
 - 4.6% cereals and bakery products
 - 16% beef and veal
 - Rising food prices are expected to continue into 2022
- 
- A close-up photograph of a shopping cart filled with fresh vegetables. In the foreground, there are bright red bell peppers. Behind them, green beans are visible. A white price tag with black text is attached to the green beans, showing the number '1.99'. The cart's metal frame and a green handle are also visible.

Source: U.S. Bureau of Labor Statistics *Consumer Price Indexes* (not seasonally adjusted) and forecasts by USDA, Economic Research Service, 2022



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Let's talk (chat) about it....

What was the dollar value of the food that you disposed of in your home?


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[illegible]

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Food Supply Chain

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graph LR; A[Production (Farming)] --> B[Postharvest and Storage]; B --> C[Processing and Packaging]; C --> D[Distribution and Retail]; D --> E[Consumer]
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[illegible][illegible][illegible]

Who is wasting food in the home?

- Household size and composition
 - Small vs Large household size
 - Children vs. no children
 - Age of household members (young vs old)
- Household income
- Presence of a food culture/value of food



Source: Ishangulyyev et al., *Foods*, 2019

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- A close-up photograph showing a person's hands pouring spaghetti from a white bowl into a white takeout container. The spaghetti is coated in a red sauce. The person is wearing a plaid shirt. The background is a plain, light-colored surface.

[illegible]

Why do we waste food?

- Lack of awareness (food is cheap; don't realize how much food is wasted)
- Desire for eating only the freshest food
- Concern about foodborne illness
- Confusion over label dates
- Spoilage
 - Improper storage; forgotten in the refrigerator; partially used ingredients
- Impulse and bulk purchases
 - BOGO sales at the grocery store
 - Food packaging
- Poor planning
- Over-preparation
- Stockpiling food (COVID-19)



Source: Natural Resources Defense Council, 2012; Neff et al., *Wasted Food: U.S. Consumer's Reported Awareness, Attitudes, and Behaviors*, June 2015; Ishangulyyev et al., *Foods*, 2019; Cosgrove et al., *International Journal of Environmental Research and Public Health*, 2021

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We Can't Save All of It.....

1. Technical factors
 - * Most foods that are wasted are perishable; safety and storage considerations
2. Time and space factors
 - * United States is a big country; getting unwanted food across the country and to other processing plants/locations is a challenge
3. Economic factors
 - * Cost to recovery food; transportation cost (plus factors #1 and #2)
4. Consumer factors
 - * Individual tastes, preferences; food habits


Source: Buzby, Wells, and Hyman, USDA ERS, *The Estimated Amount, Value and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the US*, 2014

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Environmental Protection Agency - Sustainable Management of Food


Goal: Reduce food waste by 50% in the next 15 years.

Sustainable Management of Food




Federal Interagency Food Loss and Waste Collaborative

Understanding the Issues




Food Waste in the U.S.

What Businesses and Organizations Can Do



Food Waste in the U.S.

What Individuals and Communities Can Do



Food Waste in the U.S.

Food Recovery Hierarchy

Source Reduction

Reduce the volume of surplus food generated

Feed Hungry People

Donate extra food to food banks, soup kitchens and pantries

Feed Animals

Donate food scraps to animal feed

Industrial Uses

Process waste into bioenergy and fuel, composting and food recycling for animal feed

Composting



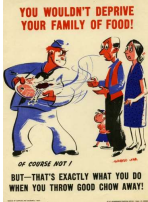

Compost waste into soil amendments

Landfill

Landfill waste into energy

Source: <https://www.epa.gov/sustainable-management-food>

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How can we reduce food waste in the home?

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What motivates consumers to reduce food waste?

Motivations to reduce food discards

Saving money

Setting an example for children

Managing my household efficiently

Thinking about hungry people

Guilt about waste in general

Making a difference through my actions

Regret about time/money spent

Greenhouse gases, energy, and water

% respondents

Very important

Important

Somewhat important

Not at all important

1. Saving money

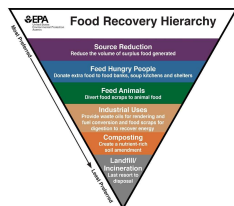
2. Setting an example for kids

Source: Neff et al. Wasted Food: U.S. Consumer's Reported Awareness, Attitudes, and Behaviors, June 2015

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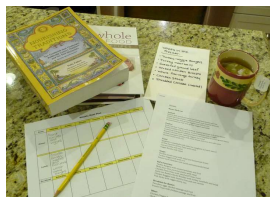
AgriLife Extension Hierarchy for Reducing Food Waste in the Home



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Plan Your Meals – Be Realistic

- Are there any ingredients in the refrigerator or freezer that you need to use first?
- Think about how many times you will be eating away from home.



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My Shopping List

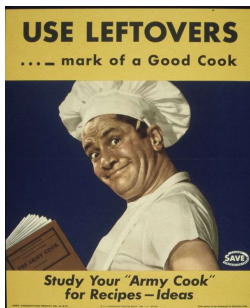
Shop Smart

- Shop your refrigerator and freezer first.
- Stick to your list...unless there is a good reason.
- Have a plan for each item you put in the cart
- Buy only what you need (and will use)
 - Bulk items – do you really save??
 - Sale items – is it a sale if it goes to waste?
 - Bundled items (“buy a rotisserie chicken and get potato salad free!”)
- Don’t shop on an empty stomach

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Store Foods Properly

- Fresh Produce
 - Store it right.
 - Use within 2-3 days for best quality
- Preserve surplus produce – but only if you will use it!
- Date your prepared foods (leftovers)
 - Use within 2-3 days for best quality/safety
- Keep an inventory of what is in your freezer



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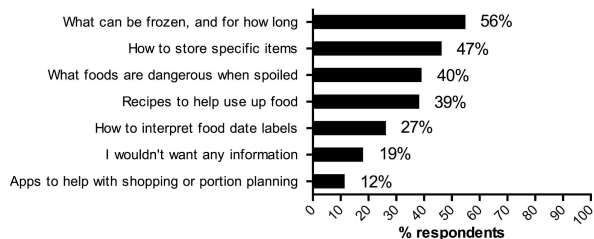
Home Composting

- Need the right mixture of “green” and “brown”
- Helps improve soil
- Keeps uneaten food out of the trash/landfill



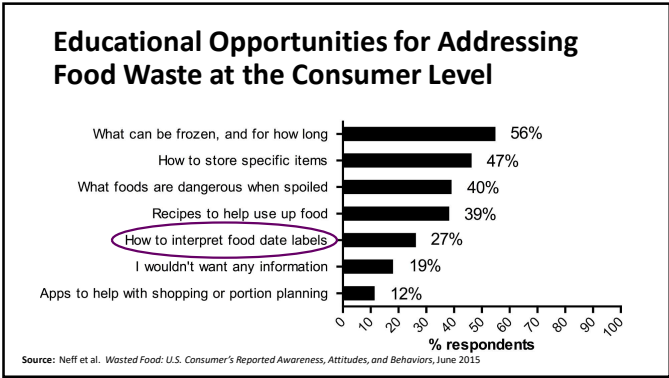
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Educational Opportunities for Addressing Food Waste at the Consumer Level

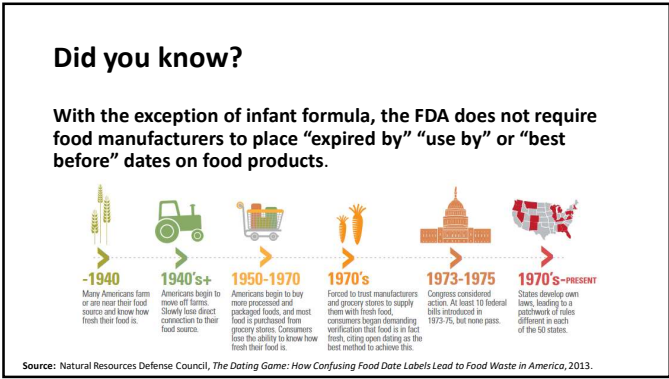


Source: Neff et al. Wasted Food: U.S. Consumer's Reported Awareness, Attitudes, and Behaviors, June 2015

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What does the date mean?

- Best-by
- Pull-by
- Best-If-Used-By
- Pack date
- Sell-by
- Use-by
- Best if used by
- Use-by
- Expiration

Packed On
JAN 22 2014

BEST BEFORE
12-04-14
GBL116009 06:48 2442

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Did you know?

84% Americans report they throw away food near the package date at least occasionally

37% of Americans do this “always” or “usually”

Source: Neff et al., Waste Management, 2019


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Consumers are confused!

- No federal regulation of sell-by dates.
- State laws exist, vary, and are constantly updated.
- Some cities have laws prohibiting the sale of perishable foods after the expiration date.
- Manufacturers determine the shelf life of their product.
- Consumers falsely believe that date labels are indicators of safety.

NRDC REPORT

The Dating Game:
How Confusing Food Date Labels Lead to Food Waste in America



NRDC Harvard

Source: Natural Resources Defense Council, The Dating Game: How Confusing Food Date Labels Lead to Food Waste in America, 2013.

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Food Keeper (USDA)



There is an app for that!

Is My Food Safe? (Academy of Nutrition and Dietetics)



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Communities are Getting On Board



Imperfect Produce



Trayless dining on college campuses



Recycling food and teaching culinary skills to unemployed adults DC Central Kitchen

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New educational program focused on reducing home food waste

- *Get a Taste for Reducing Food Waste*
 - Problem with food waste
 - Meal planning to reduce food waste
 - Understanding the dates on food labels
 - Home composting
- Participants complete a food diary pre (and hopefully post)
- Pre- and post-survey to assess impact



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Final thoughts.....






- Lots of food is being wasted that could be put to better use.
- Food waste has economic, environmental, and other consequences.
- When talking about food waste, you have to know your audience.
- The desire for "fresh" and "perfect" foods fuel food waste.
- Date stamps on labels and fear of foodborne illness are also big contributors to food waste.

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Necessity is the mother of invention.


Meet Mike Yurosek – father of the “baby carrot”

- Carrot grower; was losing up to 70% of his crop due to their shape
- Some of the culled carrots were fed to animals; others were discarded

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